ABSTRACT OF THE DISCLOSURE

A method and a network for a universal transfer mode (UTM) of transferring data packets at a regulated bit rate are disclosed. The method defines a protocol that uses an adaptive packet header to simplify packet routing and increase transfer speed. The protocol supports a plurality of data formats, such as PCM voice data, IP packets, ATM cells, frame relay and the like. The network preferably includes a plurality of modules that provide interfaces to various data sources. The modules are interconnected by an optic core with adequate inter-module links with preferably no more than two hops being required between any origination/destination pair of modules. The adaptive packet header is used for both signaling and payload transfer. The header is parsed using an algorithm to determine its function. Rate regulation is accomplished using each module control element and egress port controllers to regulate packet transfer. The protocol enables the modules to behave as a single distributed switch capable of multi-terabit transfer rates. The advantage is a high speed distributed switch capable of serving as a transfer backbone for substantially any telecommunications service.